

# EXHIBIT H

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## Smith Economics Group, Ltd.

A Division of Corporate Financial Group

*Economics / Finance / Litigation Support*

*Stan V. Smith, Ph.D.  
President*

July 29, 2019

Mr. John M. Eubanks  
Motley Rice  
28 Bridgeside Blvd.  
Mt. Pleasant, SC 29464

Re: Lopez

Dear Mr. Eubanks:

You have asked me to calculate the value of certain losses subsequent to the death of Maclovio "Joe" Lopez. These losses are: (1) the loss of wages and employee benefits; (2) the loss of housekeeping and household management services; and (3) the loss of the value of life ("LVL"), also known as loss of enjoyment of life.

### QUALIFICATIONS AND EXPERIENCE

I am President of Smith Economics Group, Ltd., headquartered in Chicago, IL, which provides economic and financial consulting nationwide. I have worked as an economic and financial consultant since 1974, after completing a Research Internship at the Federal Reserve, Board of Governors, in Washington, D.C. My curriculum vitae lists all my publications in the last 10 years and beyond.

I received my Bachelor's Degree from Cornell University. I received a Master's Degree and my Ph.D. in Economics from the University of Chicago; Gary S. Becker, Nobel Laureate 1992, was my Ph.D. thesis advisor. The University of Chicago is one of the world's preeminent institutions for the study of economics, and the home of renowned research in the law and economics movement.

As President of Smith Economics, I have performed economic analyses in a great variety of engagements, including damages analysis in personal injury and wrongful death cases, business valuation, financial analysis, antitrust, contract losses, a wide range of class action matters, employment discrimination, defamation, and intellectual property valuations including evaluations of reasonable royalty.

I have more than 40 years of experience in the field of economics. I am a member of various economic associations and served for three years as Vice President of the National Association of Forensic Economics (NAFE) which is the principal

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association in the field. I was also on the Board of Editors of the peer-reviewed journal, the Journal of Forensic Economics, for over a decade; I have also published scholarly articles in this journal. The JFE is the leading academic journal in the field of Forensic Economics.

I am the creator and founder of Ibbotson Associates' Stock, Bonds, Bills, and Inflation (SBBI) Yearbook, Quarterly, Monthly, and SBBI/PC Services. SBBI is currently published by Duff & Phelps and is also available on various Morningstar, Inc. software platforms. SBBI is widely relied upon and regarded as the most accepted and scholarly reference by the academic, actuarial and investment community, and in courts of law. The SBBI series, which acknowledges my "invaluable role" as having "originated the idea" while Managing Director at Ibbotson Associates, is generally regarded by academics in the field of finance as the most widely accepted source of statistics on the rates of return on investment securities.

I wrote the first textbook on Forensic Economic Damages that has been used in university courses in various states; as an adjunct professor, I created and taught the first course in Forensic Economics nationwide, at DePaul University in Chicago. I have performed economic analysis in many thousands of cases in almost every state since the early 1980s.

#### BACKGROUND

Maclovio "Joe" Lopez was a 41.4-year-old married male, who was born on [REDACTED], and died on September 11, 2001. Mr. Lopez's remaining life expectancy is estimated at 37.5 years. This data is from the National Center for Health Statistics, United States Life Tables, 2015, Vol. 67, No. 7, National Vital Statistics Reports, 2018. I assume an estimated trial or resolution date of January 1, 2020.

In order to perform this evaluation, I have reviewed the following materials: (1) tax records for Maclovio and Rhonda Lopez from 1997 through 2001; (2) records for Maclovio Lopez from Spiniello Companies; (3) records for Maclovio Lopez from American Benefit Plan Administrators for the So Cal Laborers Benefit Funds; (4) the May 19, 2005 report of Donald Frankenfeld; and (5) the case information form.

My methodology for estimating the losses, which is explained below, is generally based on past wage growth, interest rates, and consumer prices, as well as studies regarding the value of life. The effective net discount rate using statistically average wage growth rates and statistically average discount rates is 0.25 percent.

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My estimate of the real wage growth rate is 1.00 percent per year. This growth rate is based on Business Sector, Hourly Compensation growth data from the Major Sector Productivity and Costs Index found at the U.S. Bureau of Labor Statistics website at [www.bls.gov/data/home.htm](http://www.bls.gov/data/home.htm), Series ID: PRS84006103, for the real increase in wages primarily for the last 20 years.

My estimate of the real discount rate is 1.25 percent per year. This discount rate is based on primarily the rate of return on short-term U.S. Treasury investment for the last 20 years. The data is from the statistical series H.15 Selected Interest Rates, published by the Board of Governors of the Federal Reserve System found at [www.federalreserve.gov](http://www.federalreserve.gov). This data is also published in the Economic Report of the President Table for "Bond yields and interest rates" for the real return on U.S. Treasury investments.

Estimates of real growth and discount rates are net of inflation based on the Consumer Price Index (CPI-U), published in monthly issues of the U.S. Bureau of Labor Statistics, CPI Detailed Report (Washington, D.C.: U.S. Government Printing Office) and available at the U.S. Bureau of Labor Statistics website at [www.bls.gov/data/home.htm](http://www.bls.gov/data/home.htm), Series ID: CUUR0000SA0. The rate of inflation for the past 20 years has been 2.16 percent.

### I. LOSS OF WAGES AND EMPLOYEE BENEFITS - Annual Employment

Tables 1 through 9 show the loss of wages and benefits for Maclovio Lopez. Mr. Lopez was a laborer with Spiniello Companies at the time of his death. According to the records from Spiniello companies Mr. Lopez began working for the company in January 1999, and earned an hourly rate of \$22.75 per hour in 2001. Mr. Lopez was a member of the Southern California Laborer's Union, and records from the union indicate that he began work as a union member in 1988.

I calculate the loss of wages for Mr. Lopez based on his 1999 and 2000 average real wages with Spiniello Companies of \$61,674 in year 2000 dollars. The wages for Mr. Lopez are grown from 2000 to 2001 at 11.36 percent based on the increase in Mr. Lopez's effective hourly rate (including overtime) from 2000 of \$25.29 per hour to \$28.16 per hour in 2001. This calculation is based on Mr. Lopez's 2000 annual wages of \$60,547 with Spiniello Companies and 2,394.5 hours worked according to the union records; and Mr. Lopez's 2001 annual wages of \$43,687 with Spiniello Companies and 1551.5 hours worked according to the union records.

According to the Southern California District Council Laborers, effective July 1, 2019 the base hourly wage is \$35.24 for Journeyman laborers in "Group 1" including "General or Construction" laborers. Based on Mr. Lopez's 2001 base hourly

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rate of \$22.75, and the union 2019 base hourly rate of \$35.24, Mr. Lopez's wages are illustrated to grow at an annual rate of 2.46 percent from 2001 through 2019. Wages in 2020 are grown at an estimated national average wage growth rate of 3.0 percent. Future wages are grown at a 1.0 percent real rate.

Employee benefit estimates are based on the hourly contribution rates for benefits according to the Southern California District Council of Laborers. Effective July 1, 2019 required employer hourly contributions include \$7.47 for Health & Welfare; \$8.40 for Pension; \$0.50 for Annuity Fund; \$0.69 for Training & Retraining; \$0.30 for Center for Contract Compliance; \$0.08 for Industry Fund; \$0.07 for Contract Administration Fund; \$0.06 for Laborers Trusts' Administrative Trust Fund; and \$0.10 for Partnership for Jobs Industry Advancement Fund. These employer contributions for benefits total \$17.67 per hour worked, which is 49.44 percent of the Journeyman Group 1 base hourly rate of \$35.24 in 2019. I have assumed that employee benefits grow at the same rate as wages and are discounted to present value at the same discount rate. Since these tables assume annual work, I do not include employee benefits relating to unemployment, injury, illness or disability. Including legally-required employer Social Security contributions of 6.2 percent of wages, benefits are estimated at 55.64 percent of wages.

Personal consumption is an offset of the income. I use a personal consumption offset based on a study by Ruble, Patton, and Nelson, "Patton-Nelson Personal Consumption Tables 2011-12," Journal of Legal Economics, Vol. 21, No. 1, 2014, pp. 41-55, based on data from the U.S. Department of Labor, Bureau of Labor Statistics, "Consumer Expenditure Survey, 2011-12," Washington DC, 2012, which shows personal consumption in this case to be 14.60 percent of wages for a three-person household in 2001 through 2004, and 18.80 percent of wages for a two-person household in 2005 and thereafter.

I assume annual employment each year and show the accumulation through life expectancy. While these tables are calculated through the end of life expectancy, the losses from working through any age can be read off the table.

Based on the above assumptions, my opinion of the wage loss is \$4,596,744 ▶ Table 9; this figure assumes work to age 78.9, but the ability to work through any assumed age may be read from Table 9; for example, the loss to age 67 is \$3,110,507.

## II. LOSS OF HOUSEHOLD/FAMILY HOUSEKEEPING AND HOUSEHOLD MANAGEMENT SERVICES

Tables 10 through 12 show the pecuniary loss of tangible housekeeping chores and household management services. The



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number of hours of housekeeping and household management services for married males who work full-time is 13.01 hours per week in 2001 through 2004 when Mr. Lopez's son Joseph is assumed to be in the household, and 13.85 hours per week from 2005 through 2027, when no children are assumed to be in the household; the number of hours for married, retired males is 21.57 hours per week in 2028 and thereafter. This data is based on the American Time Use Survey published by the Bureau of Labor Statistics, [www.bls.gov/tus](http://www.bls.gov/tus), usefully summarized in a publication by Expectancy Data, The Dollar Value of A Day: 2017 Dollar Valuation, Shawnee Mission, KS, 2018.

The hourly value of the housekeeping and household management services is based on the mean hourly earnings of carpenters; maintenance and repair workers; painters, construction and maintenance; childcare workers; waiters and waitresses; cooks, private household; laundry and dry-cleaning workers; maids and housekeeping cleaners; landscaping and groundskeeping workers; bookkeeping, accounting and auditing clerks; and taxi drivers and chauffeurs, which is \$16.54 per hour in year 2018 dollars. This wage data is based on information from the U.S. Bureau of Labor Statistics, Occupational Employment Statistics, May 2018 National Occupational Employment and Wage Statistics found at [www.bls.gov/oes](http://www.bls.gov/oes). This figure is corroborated by the average hourly values published by Expectancy Data, The Dollar Value of A Day: 2017 Dollar Valuation, Shawnee Mission, KS, 2018, which is also based on the BLS Occupational Employment Statistics.

I assess such services at their estimated market value which includes a conservative estimate of 50 percent hourly non-wage component reasonably charged by agencies or free-lance individuals who supply such services on a part-time basis, and who are responsible for advertising, hiring and vetting, training, insuring and bonding the part-time service provider, and who are also responsible for pay-related costs such as social security contributions, etc. If a person were to hire a free-lance employee directly instead of going through an agency, then he or she would have to take on the responsibility for all the non-wage costs that the agency would otherwise incur and then charge for. The money the person would pay directly in wages would be only a portion of the total costs. The total costs would include those items discussed above that the agency would otherwise incur.

Adding the non-wage component to the hourly wage is consistent with labor market theory and competitive market behavior. Peer-reviewed economic research supports this theory and shows that the non-wage costs can average up to 300 percent for the wage. See, for example, Cushing, Matthew J. and David I. Rosenbaum, "Valuing Household Services: A New Look at the Replacement Cost Approach," Journal of Legal Economics, Vol 19, No. 1, 2012, pp. 37-60, wherein the authors found that non-wage costs exceed wage

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costs by 167 percent. This is more than triple the 50 percent non-wage costs amount I use, discussed above. Also see Smith, David A., Stan V. Smith, and Stephanie R. Uhl, "Estimating the Value of Family Household Management Services: Approaches and Markups," Forensic Rehabilitation & Economics, Vol 3, No. 2, 2010, pp. 85-94. According to this research, the statistical probability is 99 percent that the non-wage costs exceed 250 percent of the wage cost. The use of only a 50 percent non-wage cost makes my estimate very conservative, and it far more than compensates for two possible variations: variations in the national wage depending on locality, and variations in different types of services actually performed in the household. Thus even if one or more of the different types of services are not performed, and even if the services are provided in low wage areas, my use of the low, 50 percent non-wage costs more than compensates for these factors.

According to Merry Maids, a national home cleaning service agency, the charges for their services within the largest 100 Metropolitan Statistical Areas with populations of 500,000 and up range from \$40 to \$65 per hour, averaging \$49 per hour, in 2012. This hourly rate reflects non-wage costs of 250 percent of wages, and after adjusting for market factors, is four times the non-wage costs figure that I use, resulting in an hourly rate of more than double the rate that I use. Thus my use of only a 50 percent addition for non-wage costs is, in fact, very conservative. The hourly value of these services grows at the same rate as the wage growth rate discussed above.

Based on these assumptions, and Maclovio "Joe" Lopez's life expectancy of 78.9 years, my opinion of the loss of the value of housekeeping and household management services is \$735,981 ► Table 12.

### III. LOSS OF VALUE OF LIFE

Tables 13 through 15 show the loss of the value of life. Economists have long agreed that life is valued at more than the lost earnings capacity. My estimate of the value of life is based on many economic studies on what we, as a contemporary society, actually pay to preserve the ability to lead a normal life. The studies examine incremental pay for risky occupations as well as a multitude of data regarding expenditure for life savings by individuals, industry, and state and federal agencies. Based on the average value of a statistical life and life expectancy of 78.9 years, my opinion of the loss of the value of life for Maclovio "Joe" Lopez is \$4,713,575 ► Table 15.

My estimate of the value of life is consistent with estimates published in other studies that examine and review the broad spectrum of economic literature on the value of life. Among

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these is "The Plausible Range for the Value of Life," Journal of Forensic Economics, Vol. 3, No. 3, Fall 1990, pp. 17-39, by T. R. Miller. This study reviews 67 different estimates of the value of life published by economists in peer-reviewed academic journals. The Miller results, in most instances, show the value of life to range from approximately \$1.6 million to \$2.9 million dollars in year 1988 after-tax dollars, with a mean of approximately \$2.2 million dollars. In "The Value of Life: Estimates with Risks by Occupation and Industry," Economic Inquiry, Vol. 42, No. 1, May 2003, pp. 29-48, Professor W. K. Viscusi estimates the value of life to be approximately \$4.7 million dollars in year 2000 dollars. An early seminal paper on the value of life was written by Richard Thaler and Sherwin Rosen, "The Value of Saving a Life: Evidence from the Labor Market." in N.E. Terlickyj (ed.), Household Production and Consumption, New York: Columbia University Press, 1975, pp. 265-300. The Meta-Analyses Appendix to this report reviews additional literature suggesting a value of life of approximately \$5.4 million in year 2008 dollars.

Because it is generally accepted by economists, the economic methodology for the valuation of life has been found to meet the Daubert and Frye standards by many courts, along with the Rules of Evidence in many states nationwide. My testimony on the value of life has been accepted in approximately 225 state and federal cases nationwide in approximately two-thirds of the states and two-thirds of the federal jurisdictions. Testimony has been accepted by U.S. district and appellate courts as well as in state circuit, appellate, and supreme courts. Proof of general acceptance and other standards is found in a discussion of the extensive references to the scientific economic peer-reviewed literature on the value of life listed in the **Value of Life Appendix** to this report.

The underlying, academic, peer-reviewed studies fall into two general groups: (1) consumer behavior and purchases of safety devices; (2) wage risk premiums to workers; in addition, there is a third group of studies consisting of cost-benefit analyses of regulations. For example, one consumer safety study analyzes the costs of smoke detectors and the lifesaving reduction associated with them. One wage premium study examines the differential rates of pay for dangerous occupations with a risk of death on the job. Just as workers receive shift premiums for undesirable work hours, workers also receive a higher rate of pay to accept a increased risk of death on the job. A study of government regulation examines the lifesaving resulting from the installation of smoke stack scrubbers at high-sulphur, coal-burning power plants. As a hypothetical example of the methodology, assume that a safety device such as a carbon monoxide detector costs \$46 and results in lowering a person's risk of premature death by one chance in 100,000. The cost per life saved is obtained by dividing \$46 by the one in 100,000



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probability, yielding \$4,600,000. Overall, based on the peer-reviewed economic literature, I estimate the central tendency of the range of the economic studies to be approximately \$4.9 million in year 2019 dollars.

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Other factors may be weighed to determine if these estimated losses for Maclovio "Joe" Lopez should be adjusted because of special qualities or circumstances that economists do not as yet have a methodology for analysis.

In each set of tables, the estimated losses are calculated from September 11, 2001 through an assumed trial or resolution date of January 1, 2020, and from that date thereafter. The last table in each set accumulates the past and future estimated losses. These estimates are provided as a tool, an aid, and a guide to assist the evaluation by others.

All opinions expressed in this report are clearly labeled as such. They are rendered in accordance with generally accepted standards within the field of economics and are expressed to a reasonable degree of economic certainty. Estimates, assumptions, illustrations and the use of benchmarks, which are not opinions, but which can be viewed as hypothetical in nature, are also clearly disclosed and identified herein.

In my opinion, it is reasonable for experts in the field of economics and finance to rely on the materials and information I reviewed in this case for the formulation of my substantive opinions herein.

If additional information is provided to me, which could alter my opinions, I may incorporate any such information into an update, revision, addendum, or supplement of the opinions expressed in this report.

If you have any questions, please do not hesitate to call me.

Sincerely,



Stan V. Smith, Ph.D.  
President

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### APPENDIX: HOUSEHOLD SERVICES VALUATION

Courts have long recognized claims for the value of tangible household family services as an element of damages in personal injury and wrongful death cases, as an aspect of the pecuniary loss in such cases. These services are those that are provided by the injured family member to himself or herself and to other family members, without charge or cost. Other family members who may receive such services can include spouses, children, parents or siblings; such family members do not necessarily have to reside in the same household to receive such services.

Economists and courts have also long recognized that an appropriate method in valuing such tangible services is to value their estimated market-based costs by examining costs paid in labor markets that provide generally comparable services for. Thus, economists can value the service by looking at market equivalents from which a pecuniary standard can be established. This approach is set forth in the 1913 U.S. Supreme Court Decision, Michigan Central Railroad Company v. Vreeland, 227 U.S. 59 (1913). So this method is a century old.

The Supreme Court's suggesting in valuing compensable services in the Vreeland decision is a standard that is not rigid, but actually rather general: "[The] pecuniary loss or damage must be one which can be measured by some standard.... Compensation for such loss manifestly does not include damages by way of recompense for grief or wounded feelings." Michigan Central v. Vreeland.

Examples of lost household services that used to be performed by persons (whether fatally or non-fatally injured) can include physical chores such as mowing the lawn, painting the house, cleaning the windows, doing the laundry, washing and repairing the car, preparing the meals and doing the dishes, among others. For many decades economists have met the Supreme Court's general standard by using labor market equivalents for cooks, laundry workers, gardeners, maids, etc. in valuing the physical chores regarding housekeeping services.

Additionally, economists have recognized that tangible services to family members include services well beyond the physical housekeeping chores. For example, William G. Jungbauer and Mark J. Odegard, in *Maximizing Recovery in FELA Wrongful Death Actions*, in Assessing Family Loss in Wrongful Death Litigation: The Special Roles of Lost Services and Personal Consumption, Lawyers & Judges Publishing Co., 1999, pp. 284, indicate that a complete analysis of all services performed by family members includes much, much more than the physical housekeeping chores. Frank D. Tinari, in a peer-reviewed, scientific, economic journal article "Household Services: Toward a More Comprehensive Measure," Journal of Forensic Economics, Vol. 11, No. 3, Fall

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1998, pp. 253-265, expresses the same view. Dr. Tinari has been a tenured Professor at Seton Hall University, and is a former president of the National Association of Forensic Economics. There has been no peer-reviewed critique of this article since it appeared.

Jungbauer and Odegard indicate that a person may have provided services of many other professions such as that of a chauffeur, driving other family members to appointments, or that of a security guard, especially regarding the injury to a male spouse, etc. Every family member acts as a companion to other family members. And it is common for family members to act as counselors for one another, typically providing advice and counsel on important personal, family, medical, financial, career or other issues. The marketplace can and does value such items of loss. If the person cannot provide these services, or does so at a reduced capacity or rate, there is a distinct and definite loss to the other family members. These losses have a definite and easily measurable pecuniary value. Vreeland requires only that a "reasonable expectation" of loss of services be proven and that such loss be valued by some standard, presumably a reasonably-based economic standard, to allow recovery.

The economic literature on recovery of loss of services discusses an estimated market-oriented valuation cost method to assess the pecuniary value of the loss of accompaniment services, as well as the value of advice, guidance and counsel services that family members provide to one another, within a broadly defined scope of family services. See, for example, Frank D. Tinari, "Household Services: Toward a More Comprehensive Measure, " Journal of Forensic Economics, Vol. 11, No. 3, Fall 1998, pp. 253-265.

Finally, according to Chief Justice Robert Wilentz of the Supreme Court of New Jersey, in Green v. Bittner, 85 NJ 1, 1980, pp. 12, accompaniment services, to be compensable, must be that which would have provided services substantially equivalent to those provided by the companions often hired today by the aged or infirm, or substantially equivalent to services provided by nurses or practical nurses; and its value must be confined to what the marketplace would pay a stranger with similar qualifications for performing such services.

In valuing the household services that are provided by family members to one another, beyond the physical housekeeping chores, both the U.S Supreme Court and the New Jersey Supreme Court discuss looking at labor markets for the equivalent value of such services. This methodology is identical to the traditional approach that economists have been using for over four decades in valuing the physical chores involved in housekeeping services.

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**APPENDIX: VALUE OF LIFE**

The economic methodology for the valuation of life has been found to meet the Daubert and Frye standards by many courts, along with the Rules of Evidence in many states nationwide. My testimony on the value of life has been accepted in approximately 225 state and federal cases nationwide in approximately two-thirds of the states and two-thirds of the federal jurisdictions. Testimony has been accepted by U.S. district and appellate courts as well as in state circuit, appellate, and supreme courts. The Daubert standard sets forth four criteria:

1. Testing of the theory and science
2. Peer Review
3. Known or potential rate of error
4. Generally accepted.

**Testing of the theory and science** has been accomplished over the past four decades, since the 1960s. Dozens of economists of high renown have published over a hundred articles in high quality, peer-reviewed economic journals measuring the value of life. The value of life theories are perhaps among the most well-tested in the field of economics, as evidenced by the enormous body of economic scientific literature that has been published in the field and is discussed below.

**Peer Review** of the concepts and methodology have been extraordinarily extensive. One excellent review of this extensive, peer-reviewed literature can be found in "The Value of Risks to Life and Health," W. K. Viscusi, Journal of Economic Literature, Vol. 31, December 1993, pp. 1912-1946. A second is "The Value of a Statistical Life: A Critical Review of Market Estimates throughout the World." W. K. Viscusi and J. E. Aldy, Journal of Risk and Uncertainty, Vol. 27, No. 1, November 2002, pp. 5-76. Additional theoretical and empirical work by Viscusi, a leading researcher in the field, can be found in: "The Value of Life", W. K. Viscusi, John M. Olin Center for Law, Economics, and Business, Harvard Law School, Discussion Paper No. 517, June 2005. An additional peer-reviewed article discusses the application to forensic economics: "The Plausible Range for the Value of Life," T. R. Miller, Journal of Forensic Economics, Vol. 3, No. 3, Fall 1990, pp. 17-39, which discusses the many dozens of articles published in other peer-reviewed economic journals on this topic. This concept is discussed in detail in "Willingness to Pay Comes of Age: Will the System Survive?" T. R. Miller, Northwestern University Law Review, Summer 1989, pp. 876-907, and "Hedonic Damages in Personal Injury and Wrongful Death



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Litigation," by Stan V. Smith in Gaughan and Thornton, eds., Litigation Economics, Contemporary Studies in Economic and Financial Analysis, Vol. 74, pp. 39-59, JAI Press, Greenwich, CT, 1993. Kenneth Arrow, a Nobel Laureate in economics, discusses this method for valuing life in "Invaluable Goods," Journal of Economic Literature, Vol. 35, No. 2, 1997, pp. 759. See the Meta-Analyses Appendix for an additional review of the literature.

**The known or potential rate of error** is well researched. All of these articles discuss the known or potential rate of error, well within the acceptable standard in the field of economics, generally using a 95% confidence rate for the statistical testing and acceptance of results. There are few areas in the field of economics where the known or potential rate of error has been as well-accepted and subject to more extensive investigation.

**General Acceptance** of the concepts and methodology on the value of life in the field of economics is extensive. This methodology is and has been generally accepted in the field of economics for many years. Indeed, according to the prestigious and highly-regarded research institute, The Rand Corporation, by 1988, the peer-reviewed scientific methods for estimating the value of life were well-accepted: "Most economists would agree that the willingness-to-pay methodology is the most conceptually appropriate criterion for establishing the value of life," Computing Economic loss in Cases of Wrongful Death, King and Smith, Rand Institute for Civil Justice, R-3549-ICJ, 1988.

While first discussed in cutting edge, peer-reviewed economic journals, additional proof of general acceptance is now indicated by the fact that this methodology is now taught in standard economics courses at the undergraduate and graduate level throughout hundreds of colleges and universities nationwide as well as the fact that it is taught and discussed in widely-accepted textbooks in the field of law and economics: Economics, Sixth Edition, David C. Colander, McGraw-Hill Irwin, Boston, 2006, pp. 463-465; this introductory economics textbook is the third most widely used textbook in college courses nationwide. Hamermesh and Rees's The Economics of Work and Pay, Harper-Collins, 1993, Chapter 13, a standard advanced textbook in labor economics, also discusses the methodology for valuing life. Other textbooks discuss this topic as well. Richard Posner, a Judge and former Chief Judge of the U.S. Court of Appeals for the highly regarded 7th Circuit and Senior Lecturer at the University of Chicago Law School, one of most prolific legal writers in America, details the Value of Life approach in his widely used textbooks: Economic Analysis of Law, 1986, Little Brown & Co., pp. 182-185 and Tort Law, 1982, Little Brown & Co., pp. 120-126.

As further evidence of general acceptance in the field, some surveys (albeit non-scientific) published in the field of



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forensic economics show that hundreds of economists nationwide are now familiar with this methodology and are available to prepare (and critique) forensic economic value of life estimates. Indeed, some economists who indicate they will prepare such analysis for plaintiffs also are willing to critique such analysis for defendants, as I have done. That an economist is willing to critique a report does not indicate that he or she is opposed to the concept or the methodology, but merely available to assure that the plaintiff economist has employed proper techniques. The fact that there are economists who indicate they do not prepare estimates of value of life is again no indication that they oppose the methodology: many claim they are not familiar with the literature and untrained in this area. While some CPAs and others without a degree in economics have opposed these methods, such professionals do not have the requisite academic training and are unqualified to make such judgements. However, as in any field of economics, this area is not without any dissent. General acceptance does not mean universal acceptance.

Additional evidence of general acceptance in the field is found in the teaching of the concepts regarding the value of life. Forensic Economics is now taught as a special field in a number of institutions nationwide. I taught what is believed to be the first course ever presented in the field of Forensic Economics at DePaul University in Spring, 1990. My own book, Economic/Hedonic Damages, Anderson, 1990, and supplemental updates thereto, co-authored with Dr. Michael Brookshire, a Professor of Economics in West Virginia, has been used as a textbook in at least 5 colleges and universities nationwide in such courses in economics, and has a thorough discussion of the methodology. Toppino et. al., in "Forensic Economics in the Classroom," published in The Earnings Analyst, Journal of the American Rehabilitation Economics Association, Vol. 4, 2001, pp. 53-86, indicate that hedonic damages is one of 15 major topic areas taught in such courses.

Lastly, general acceptance is found by examining publications in the primary journal in the field of Forensic Economics, which is the peer-reviewed Journal of Forensic Economics, where there have been published many articles on the value of life. Some are cited above. Others include: "The Econometric Basis for Estimates of the Value of Life," W. K. Viscusi, Vol 3, No. 3, Fall 1990, pp. 61-70; "Hedonic Damages in the Courtroom Setting." Stan V. Smith, Vol. 3, No. 3, Fall 1990, pp. 41-49; "Issues Affecting the Calculated Value of Life," E. P. Berla, M. L. Brookshire and Stan V. Smith, Vol 3, No. 1, 1990, pp. 1-8; "Hedonic Damages and Personal Injury: A Conceptual Approach." G. R. Albrecht, Vol. 5., No. 2, Spring/Summer 1992, pp. 97-104; "The Application of the Hedonic Damages Concept to Wrongful and Personal Injury Litigation." G. R. Albrecht, Vol. 7, No. 2, Spring/Summer 1994, pp. 143-150; and also "A Review of the Monte Carlo Evidence Concerning Hedonic Value of Life Estimates," R. F.

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Gilbert, Vol. 8, No. 2, Spring/Summer 1995, pp. 125-130. Professor Ike Mathur, while Chairman of the Department of Finance at Southern Illinois University wrote an article on how the value of life studies can be used to provide a basis for estimating the value of life per year in application to litigation. This article corroborates my approach: "Estimating Value of Life per Life Year." I. Mathur, Journal of Forensic Economics, Vol. 3, No. 3, 1990, pp. 95-96. As do many of the authors of applications of the value of life literature to litigation economics, Professor Mathur has frequently testified in court, and courts have admitted his testimony.

It is important to note that this methodology is endorsed and employed by the U. S. Government as the standard and recommended approach for use by all U. S. Agencies in valuing life for policy purposes, as mandated in current and past Presidential Executive Orders in effect since 1972, and as discussed in "Report to Congress on the Costs and Benefits of Federal Regulations," Office of Management and Budget, 1998, and "Economic Analysis of Federal Regulations Under Executive Order 12866," Executive Office of the President, Office of Management and Budget, pp. 1-37, and "Report to the President on Executive Order No. 12866," Regulatory Planning and Review, May 1, 1994, Office of Information and Regulatory Affairs, Office of Management and Budget. Prior presidents signed similar orders as discussed in "Federal Agency Valuations of Human life," Administrative Conference of the United States, Report for Recommendation 88-7, December 1988, pp. 368-408. 926

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### APPENDIX: META-ANALYSES AND VALUE OF LIFE RESULTS SINCE 2000

Below I list the principal systematic reviews (meta-analyses), since the year 2000, of the value of life literature, and the values of a statistical life that they recommend. In statistics, a meta-analysis combines the results of several studies that address a set of related research hypotheses. Meta-analysis increase the statistical power of studies by analyzing a group of studies and provide a more powerful and accurate data analysis than would result from analyzing each study alone. Based on those reviews, the Summary Table suggests a best estimate. The following table summarizes the studies and their findings.

These statistically based studies place the value between \$4.4 and \$7.5 million, with \$5.9 million in year 2005 dollars representing a conservative yet credible estimate of the average (and range midpoint) of the values of a statistical life published in the studies in year 2005 dollars. Net of human capital, a credible net value of life based on all these literature reviews to be \$4.8 million in year 2005 dollars, or \$5.4 million in year 2008 dollars.

The actual value that I use, \$4.1 million in year 2008 dollars (\$4.9 million in year 2019 dollars) is approximately 24 percent lower than a conservative average estimate based on the credible meta-analyses. This value was originally based on a review conducted in the late 1980s, averaging the results published by that time. I have increased that late 1980s value only by inflation over time, despite the fact a review of literature over the years since that time has put obvious upward pressure on the figure that I use.

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## VALUE OF STATISTICAL LIFE SUMMARY TABLE

Mean and range of value of statistical life estimates (in 2005 dollars) from the best meta-analyses and systematic reviews since 2000 and characteristics of those reviews.

Study	Formal Meta-Analysis?	Number of Values	Best Estimate (2005 Dollars)	Range	Context
Miller 2000	Yes	68 estimates	\$5.1M	\$4.5-\$6.2M	US estimate from all
Mrozek & Taylor 2002	Yes	203 estimates	\$4.4M	+ or - 35%	Labor market
Viscusi & Aldy 2003	Yes	49 estimates	\$6.5M	\$5.1-\$9.6M	Labor market, US estimate from all
Kochi et al. 2006	Yes	234 estimates	\$6.0M	+ or - 44%	Labor market survey
Bellavance 2006 (published in 2009)	Yes	37 estimates	\$7.5M	+ or - 19%	Labor market

Adapted from Ted R. Miller's paper "Hedonic Damages," Journal of Forensic Economics, Vol. 20, No. 2 (October 2008), pp. 137-153.

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Miller (2000) started from the Miller 1989 JFE estimates and used statistical methods to adjust for differences between studies. It also added newer studies, primarily ones outside the United States. The authors specified the most appropriate study approach a priori, which allowed calculation of a best estimate from the statistical regression. Miller, Ted R, "Variations between Countries in Values of Statistical Life", Journal of Transport Economics and Policy, Vol. 34, No. 2 (May 2000), pp. 169-188.

Mrozek and Taylor (2002) searched intensively for studies of the value of life implied by wages paid for risky jobs. They coded all values from each study rather than a most appropriate estimate. A statistical analysis identified what factors accounted for the differences in values between studies. The authors specified the most appropriate study approach a priori, which allowed calculation of a best estimate from the statistical regression. Mrozek, Janusz R. and Laura O. Taylor, "What Determines the Value of Life? A Meta-Analysis", Journal of Policy Analysis and Management, Vol. 21, No. 2 (2002), pp. 253-270.

Viscusi and Aldy (2003) focused on values from labor market studies that they considered of high quality and that provided data on risk levels and other important explanatory variables. They used statistical methods to account for variations between studies and derive a best estimate. W.K. Viscusi and J.E. Aldy, "The Value of a Statistical Life: A Critical Review of Market Estimates Throughout the World", Journal of Risk and Uncertainty, Vol. 27, No. 1 (2003), pp. 5-76.

Kochi et al. (2006) searched intensively for studies of the value of life implied by wages and coded all values from each study rather than a most appropriate estimate. They did not filter study quality carefully. The best estimate was derived by statistical methods based on the distribution of the values within and across studies. Kochi, Ikuho, Bryan Hubbell, and Randall Kramer, "An Empirical Bayes Approach to Combining and Comparing Estimates of the Value of a Statistical Life for Environmental Policy Analysis", Environmental and Resource Economics, Vol. 34 (2006), pp. 385-406.

Bellavance et al. (2009) focused on values from labor market studies that they considered of high quality and that provided data on risk levels and other important explanatory variables. They used statistical methods to account for variations between studies and derive a best estimate. Bellavance, Francois, Georges Dionne, and Martin Lebeau, "The Value of a Statistical Life: A Meta-Analysis with a Mixed Effects Regression Model", Journal of Health Economics, Vol. 28, Issue 2, (2009), pp. 444-464. 3A22



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## SUMMARY OF LOSSES FOR MACLOVIO "JOE" LOPEZ

TABLE *****	DESCRIPTION *****	ESTIMATE *****
	<u>EARNINGS</u>	
	LOSS OF WAGES & BENEFITS, NET OF PERSONAL CONSUMPTION	
9	Annual Employment to age 67	\$3,110,507
	-----	
	<u>HOUSEHOLD/FAMILY SERVICES</u>	
	LOSS OF HOUSEHOLD/FAMILY HOUSEKEEPING AND HOME MANAGEMENT SERVICES	
12		\$ 735,981
	-----	
	<u>LOSS OF ENJOYMENT OF LIFE</u>	
15	LOSS OF VALUE OF LIFE	\$4,713,575

The information on this Summary of Losses is intended to summarize losses under certain given assumptions. Please refer to the report and the tables for all the opinions.

Table 1

## LOSS OF PAST WAGES

2001 - 2019

YEAR	AGE	WAGES	CUMULATE
****	***	*****	*****
2001	41	\$20,886	\$20,886
2002	42	70,370	91,256
2003	43	72,101	163,357
2004	44	73,875	237,232
2005	45	75,692	312,924
2006	46	77,554	390,478
2007	47	79,462	469,940
2008	48	81,417	551,357
2009	49	83,420	634,777
2010	50	85,472	720,249
2011	51	87,575	807,824
2012	52	89,729	897,553
2013	53	91,936	989,489
2014	54	94,198	1,083,687
2015	55	96,515	1,180,202
2016	56	98,889	1,279,091
2017	57	101,322	1,380,413
2018	58	103,815	1,484,228
2019	59	106,369	\$1,590,597
LOPEZ		\$1,590,597	

Table 2

LOSS OF PAST EMPLOYEE BENEFITS  
2001 - 2019

YEAR	AGE	EMPLOYEE BENEFITS	CUMULATE
****	***	*****	*****
2001	41	\$11,621	\$11,621
2002	42	39,154	50,775
2003	43	40,117	90,892
2004	44	41,104	131,996
2005	45	42,115	174,111
2006	46	43,151	217,262
2007	47	44,213	261,475
2008	48	45,300	306,775
2009	49	46,415	353,190
2010	50	47,557	400,747
2011	51	48,727	449,474
2012	52	49,925	499,399
2013	53	51,153	550,552
2014	54	52,412	602,964
2015	55	53,701	656,665
2016	56	55,022	711,687
2017	57	56,376	768,063
2018	58	57,763	825,826
2019	59	59,184	\$885,010
LOPEZ		\$885,010	

Table 3

LOSS OF PAST PERSONAL CONSUMPTION  
2001 - 2019

YEAR	AGE	PERSONAL CONSUMPTION	CUMULATE
****	***	*****	*****
2001	41	-\$4,745	-\$4,745
2002	42	-15,988	-20,733
2003	43	-16,381	-37,114
2004	44	-16,784	-53,898
2005	45	-22,147	-76,045
2006	46	-22,692	-98,737
2007	47	-23,251	-121,988
2008	48	-23,823	-145,811
2009	49	-24,409	-170,220
2010	50	-25,009	-195,229
2011	51	-25,624	-220,853
2012	52	-26,255	-247,108
2013	53	-26,900	-274,008
2014	54	-27,562	-301,570
2015	55	-28,240	-329,810
2016	56	-28,935	-358,745
2017	57	-29,647	-388,392
2018	58	-30,376	-418,768
2019	59	-31,124	-\$449,892
LOPEZ		-\$449,892	

Table 4

## ECONOMIC LOSS TO DATE

2001 - 2019

YEAR	AGE	WAGES	EMPLOYEE BENEFITS	PERSONAL CONSUMPTION	TOTAL	CUMULATE
****	***	*****	*****	*****	*****	*****
2001	41	\$20,886	\$11,621	-\$4,745	\$27,762	\$27,762
2002	42	70,370	39,154	-15,988	93,536	121,298
2003	43	72,101	40,117	-16,381	95,837	217,135
2004	44	73,875	41,104	-16,784	98,195	315,330
2005	45	75,692	42,115	-22,147	95,660	410,990
2006	46	77,554	43,151	-22,692	98,013	509,003
2007	47	79,462	44,213	-23,251	100,424	609,427
2008	48	81,417	45,300	-23,823	102,894	712,321
2009	49	83,420	46,415	-24,409	105,426	817,747
2010	50	85,472	47,557	-25,009	108,020	925,767
2011	51	87,575	48,727	-25,624	110,678	1,036,445
2012	52	89,729	49,925	-26,255	113,399	1,149,844
2013	53	91,936	51,153	-26,900	116,189	1,266,033
2014	54	94,198	52,412	-27,562	119,048	1,385,081
2015	55	96,515	53,701	-28,240	121,976	1,507,057
2016	56	98,889	55,022	-28,935	124,976	1,632,033
2017	57	101,322	56,376	-29,647	128,051	1,760,084
2018	58	103,815	57,763	-30,376	131,202	1,891,286
2019	59	106,369	59,184	-31,124	134,429	\$2,025,715
LOPEZ		\$1,590,597	\$885,010	-\$449,892	\$2,025,715	



Table 5

PRESENT VALUE OF FUTURE WAGES  
2020 - 2039

YEAR	AGE	WAGES	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
****	***	*****	*****	*****	*****
2020	60	\$109,578	0.98765	\$108,225	\$108,225
2021	61	110,674	0.97546	107,958	216,183
2022	62	111,781	0.96342	107,692	323,875
2023	63	112,899	0.95152	107,426	431,301
2024	64	114,028	0.93978	107,161	538,462
2025	65	115,168	0.92817	106,895	645,357
2026	66	116,320	0.91672	106,633	751,990
2027	67	117,483	0.90540	106,369	858,359
2028	68	118,658	0.89422	106,106	964,465
2029	69	119,845	0.88318	105,845	1,070,310
2030	70	121,043	0.87228	105,583	1,175,893
2031	71	122,253	0.86151	105,322	1,281,215
2032	72	123,476	0.85087	105,062	1,386,277
2033	73	124,711	0.84037	104,803	1,491,080
2034	74	125,958	0.82999	104,544	1,595,624
2035	75	127,218	0.81975	104,287	1,699,911
2036	76	128,490	0.80963	104,029	1,803,940
2037	77	129,775	0.79963	103,772	1,907,712
2038	78	131,073	0.78976	103,516	2,011,228
2039	79	29,378	0.78757	23,137	\$2,034,365

MACLOVIO LOPEZ

\$2,034,365

Table 6

PRESENT VALUE OF FUTURE EMPLOYEE BENEFITS  
2020 - 2039

YEAR	AGE	EMPLOYEE BENEFITS	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
****	***	*****	*****	*****	*****
2020	60	\$60,969	0.98765	\$60,216	\$60,216
2021	61	61,579	0.97546	60,068	120,284
2022	62	62,195	0.96342	59,920	180,204
2023	63	62,817	0.95152	59,772	239,976
2024	64	63,445	0.93978	59,624	299,600
2025	65	64,079	0.92817	59,476	359,076
2026	66	64,720	0.91672	59,330	418,406
2027	67	65,368	0.90540	59,184	477,590
2028	68	66,021	0.89422	59,037	536,627
2029	69	66,682	0.88318	58,892	595,519
2030	70	67,348	0.87228	58,746	654,265
2031	71	68,022	0.86151	58,602	712,867
2032	72	68,702	0.85087	58,456	771,323
2033	73	69,389	0.84037	58,312	829,635
2034	74	70,083	0.82999	58,168	887,803
2035	75	70,784	0.81975	58,025	945,828
2036	76	71,492	0.80963	57,882	1,003,710
2037	77	72,207	0.79963	57,739	1,061,449
2038	78	72,929	0.78976	57,596	1,119,045
2039	79	16,346	0.78757	12,874	\$1,131,919

MACLOVIO LOPEZ

\$1,131,919

Table 7

PRESENT VALUE OF FUTURE PERSONAL CONSUMPTION  
2020 - 2039

YEAR	AGE	PERSONAL CONSUMPTION	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
****	***	*****	*****	*****	*****
2020	60	-\$32,063	0.98765	-\$31,667	-\$31,667
2021	61	-32,383	0.97546	-31,588	-63,255
2022	62	-32,707	0.96342	-31,511	-94,766
2023	63	-33,034	0.95152	-31,433	-126,199
2024	64	-33,365	0.93978	-31,356	-157,555
2025	65	-33,698	0.92817	-31,277	-188,832
2026	66	-34,035	0.91672	-31,201	-220,033
2027	67	-34,376	0.90540	-31,124	-251,157
2028	68	-34,719	0.89422	-31,046	-282,203
2029	69	-35,067	0.88318	-30,970	-313,173
2030	70	-35,417	0.87228	-30,894	-344,067
2031	71	-35,771	0.86151	-30,817	-374,884
2032	72	-36,129	0.85087	-30,741	-405,625
2033	73	-36,490	0.84037	-30,665	-436,290
2034	74	-36,855	0.82999	-30,589	-466,879
2035	75	-37,224	0.81975	-30,514	-497,393
2036	76	-37,596	0.80963	-30,439	-527,832
2037	77	-37,972	0.79963	-30,364	-558,196
2038	78	-38,352	0.78976	-30,289	-588,485
2039	79	-8,596	0.78757	-6,770	-\$595,255
MACLOVIO LOPEZ				-\$595,255	

Table 8

PRESENT VALUE OF FUTURE WAGE AND BENEFIT LOSS  
2020 - 2039

YEAR	AGE	WAGES	EMPLOYEE BENEFITS	PERSONAL CONSUMPTION	TOTAL	CUMULATE
****	***	*****	*****	*****	*****	*****
2020	60	\$108,225	\$60,216	-\$31,667	\$136,774	\$136,774
2021	61	107,958	60,068	-31,588	136,438	273,212
2022	62	107,692	59,920	-31,511	136,101	409,313
2023	63	107,426	59,772	-31,433	135,765	545,078
2024	64	107,161	59,624	-31,356	135,429	680,507
2025	65	106,895	59,476	-31,277	135,094	815,601
2026	66	106,633	59,330	-31,201	134,762	950,363
2027	67	106,369	59,184	-31,124	134,429	1,084,792
2028	68	106,106	59,037	-31,046	134,097	1,218,889
2029	69	105,845	58,892	-30,970	133,767	1,352,656
2030	70	105,583	58,746	-30,894	133,435	1,486,091
2031	71	105,322	58,602	-30,817	133,107	1,619,198
2032	72	105,062	58,456	-30,741	132,777	1,751,975
2033	73	104,803	58,312	-30,665	132,450	1,884,425
2034	74	104,544	58,168	-30,589	132,123	2,016,548
2035	75	104,287	58,025	-30,514	131,798	2,148,346
2036	76	104,029	57,882	-30,439	131,472	2,279,818
2037	77	103,772	57,739	-30,364	131,147	2,410,965
2038	78	103,516	57,596	-30,289	130,823	2,541,788
2039	79	23,137	12,874	-6,770	29,241	\$2,571,029
LOPEZ		\$2,034,365	\$1,131,919	-\$595,255	\$2,571,029	

Table 9

PRESENT VALUE OF NET WAGE AND BENEFIT LOSS  
2001 - 2039

YEAR	AGE	WAGES	EMPLOYEE BENEFITS	PERSONAL CONSUMPTION	TOTAL	CUMULATE
****	***	*****	*****	*****	*****	*****
2001	41	\$20,886	\$11,621	-\$4,745	\$27,762	\$27,762
2002	42	70,370	39,154	-15,988	93,536	121,298
2003	43	72,101	40,117	-16,381	95,837	217,135
2004	44	73,875	41,104	-16,784	98,195	315,330
2005	45	75,692	42,115	-22,147	95,660	410,990
2006	46	77,554	43,151	-22,692	98,013	509,003
2007	47	79,462	44,213	-23,251	100,424	609,427
2008	48	81,417	45,300	-23,823	102,894	712,321
2009	49	83,420	46,415	-24,409	105,426	817,747
2010	50	85,472	47,557	-25,009	108,020	925,767
2011	51	87,575	48,727	-25,624	110,678	1,036,445
2012	52	89,729	49,925	-26,255	113,399	1,149,844
2013	53	91,936	51,153	-26,900	116,189	1,266,033
2014	54	94,198	52,412	-27,562	119,048	1,385,081
2015	55	96,515	53,701	-28,240	121,976	1,507,057
2016	56	98,889	55,022	-28,935	124,976	1,632,033
2017	57	101,322	56,376	-29,647	128,051	1,760,084
2018	58	103,815	57,763	-30,376	131,202	1,891,286
2019	59	106,369	59,184	-31,124	134,429	2,025,715
2020	60	108,225	60,216	-31,667	136,774	2,162,489
2021	61	107,958	60,068	-31,588	136,438	2,298,927
2022	62	107,692	59,920	-31,511	136,101	2,435,028
2023	63	107,426	59,772	-31,433	135,765	2,570,793
2024	64	107,161	59,624	-31,356	135,429	2,706,222
2025	65	106,895	59,476	-31,277	135,094	2,841,316
2026	66	106,633	59,330	-31,201	134,762	2,976,078
2027	67	106,369	59,184	-31,124	134,429	3,110,507
2028	68	106,106	59,037	-31,046	134,097	3,244,604
2029	69	105,845	58,892	-30,970	133,767	3,378,371
2030	70	105,583	58,746	-30,894	133,435	3,511,806
2031	71	105,322	58,602	-30,817	133,107	3,644,913
2032	72	105,062	58,456	-30,741	132,777	3,777,690
2033	73	104,803	58,312	-30,665	132,450	3,910,140
2034	74	104,544	58,168	-30,589	132,123	4,042,263
2035	75	104,287	58,025	-30,514	131,798	4,174,061
2036	76	104,029	57,882	-30,439	131,472	4,305,533
2037	77	103,772	57,739	-30,364	131,147	4,436,680
2038	78	103,516	57,596	-30,289	130,823	4,567,503
2039	79	23,137	12,874	-6,770	29,241	\$4,596,744
LOPEZ		\$3,624,962	\$2,016,929	-\$1,045,147	\$4,596,744	



Table 10

LOSS OF PAST HOUSEHOLD SERVICES  
2001 - 2019

YEAR	AGE	HOUSEHOLD SERVICES	CUMULATE
****	***	*****	*****
2001	41	\$3,203	\$3,203
2002	42	10,749	13,952
2003	43	11,315	25,267
2004	44	11,814	37,081
2005	45	12,959	50,040
2006	46	13,464	63,504
2007	47	14,013	77,517
2008	48	14,426	91,943
2009	49	14,577	106,520
2010	50	14,756	121,276
2011	51	14,832	136,108
2012	52	15,702	151,810
2013	53	15,702	167,512
2014	54	16,105	183,617
2015	55	16,502	200,119
2016	56	16,855	216,974
2017	57	17,362	234,336
2018	58	17,870	252,206
2019	59	18,406	\$270,612
LOPEZ		\$270,612	

Table 11

PRESENT VALUE OF FUTURE HOUSEHOLD SERVICES  
2020 - 2039

YEAR	AGE	HOUSEHOLD SERVICES	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
****	***	*****	*****	*****	*****
2020	60	\$18,958	0.98765	\$18,724	\$18,724
2021	61	19,148	0.97546	18,678	37,402
2022	62	19,339	0.96342	18,632	56,034
2023	63	19,532	0.95152	18,585	74,619
2024	64	19,727	0.93978	18,539	93,158
2025	65	19,924	0.92817	18,493	111,651
2026	66	20,123	0.91672	18,447	130,098
2027	67	20,324	0.90540	18,401	148,499
2028	68	31,972	0.89422	28,590	177,089
2029	69	32,292	0.88318	28,520	205,609
2030	70	32,615	0.87228	28,449	234,058
2031	71	32,941	0.86151	28,379	262,437
2032	72	33,270	0.85087	28,308	290,745
2033	73	33,603	0.84037	28,239	318,984
2034	74	33,939	0.82999	28,169	347,153
2035	75	34,278	0.81975	28,099	375,252
2036	76	34,621	0.80963	28,030	403,282
2037	77	34,967	0.79963	27,961	431,243
2038	78	35,317	0.78976	27,892	459,135
2039	79	7,916	0.78757	6,234	\$465,369
MACLOVIO LOPEZ				\$465,369	

Table 12

PRESENT VALUE OF NET HOUSEHOLD SERVICE LOSS  
2001 - 2039

YEAR	AGE	HOUSEHOLD SERVICES	CUMULATE
****	***	*****	*****
2001	41	\$3,203	\$3,203
2002	42	10,749	13,952
2003	43	11,315	25,267
2004	44	11,814	37,081
2005	45	12,959	50,040
2006	46	13,464	63,504
2007	47	14,013	77,517
2008	48	14,426	91,943
2009	49	14,577	106,520
2010	50	14,756	121,276
2011	51	14,832	136,108
2012	52	15,702	151,810
2013	53	15,702	167,512
2014	54	16,105	183,617
2015	55	16,502	200,119
2016	56	16,855	216,974
2017	57	17,362	234,336
2018	58	17,870	252,206
2019	59	18,406	270,612
2020	60	18,724	289,336
2021	61	18,678	308,014
2022	62	18,632	326,646
2023	63	18,585	345,231
2024	64	18,539	363,770
2025	65	18,493	382,263
2026	66	18,447	400,710
2027	67	18,401	419,111
2028	68	28,590	447,701
2029	69	28,520	476,221
2030	70	28,449	504,670
2031	71	28,379	533,049
2032	72	28,308	561,357
2033	73	28,239	589,596
2034	74	28,169	617,765
2035	75	28,099	645,864
2036	76	28,030	673,894
2037	77	27,961	701,855
2038	78	27,892	729,747
2039	79	6,234	\$735,981
LOPEZ		\$735,981	

Table 13

LOSS OF PAST VALUE OF LIFE TP MACLOVIO  
2001 - 2019

YEAR	AGE	LVL	CUMULATE
****	***	*****	*****
2001	41	\$29,936	\$29,936
2002	42	100,782	130,718
2003	43	102,677	233,395
2004	44	106,024	339,419
2005	45	109,650	449,069
2006	46	112,436	561,505
2007	47	117,023	678,528
2008	48	117,128	795,656
2009	49	120,314	915,970
2010	50	122,119	1,038,089
2011	51	125,734	1,163,823
2012	52	127,921	1,291,744
2013	53	129,840	1,421,584
2014	54	130,827	1,552,411
2015	55	131,782	1,684,193
2016	56	134,510	1,818,703
2017	57	137,348	1,956,051
2018	58	139,971	2,096,022
2019	59	142,771	\$2,238,793
LOPEZ		\$2,238,793	

PRESENT VALUE OF FUTURE LOSS OF VALUE OF LIFE TO MACLOVIO  
2020 - 2039

YEAR	AGE	LVL	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
****	***	*****	*****	*****	*****
2020	60	\$145,626	0.98765	\$143,828	\$143,828
2021	61	145,626	0.97546	142,052	285,880
2022	62	145,626	0.96342	140,299	426,179
2023	63	145,626	0.95152	138,566	564,745
2024	64	145,626	0.93978	136,856	701,601
2025	65	145,626	0.92817	135,166	836,767
2026	66	145,626	0.91672	133,498	970,265
2027	67	145,626	0.90540	131,850	1,102,115
2028	68	145,626	0.89422	130,222	1,232,337
2029	69	145,626	0.88318	128,614	1,360,951
2030	70	145,626	0.87228	127,027	1,487,978
2031	71	145,626	0.86151	125,458	1,613,436
2032	72	145,626	0.85087	123,909	1,737,345
2033	73	145,626	0.84037	122,380	1,859,725
2034	74	145,626	0.82999	120,868	1,980,593
2035	75	145,626	0.81975	119,377	2,099,970
2036	76	145,626	0.80963	117,903	2,217,873
2037	77	145,626	0.79963	116,447	2,334,320
2038	78	145,626	0.78976	115,010	2,449,330
2039	79	32,317	0.78757	25,452	\$2,474,782
MACLOVIO LOPEZ				\$2,474,782	

Table 15

PRESENT VALUE OF NET LOSS OF VALUE OF LIFE TO MACLOVIO  
2001 - 2039

YEAR	AGE	LVL	CUMULATE
****	***	*****	*****
2001	41	\$29,936	\$29,936
2002	42	100,782	130,718
2003	43	102,677	233,395
2004	44	106,024	339,419
2005	45	109,650	449,069
2006	46	112,436	561,505
2007	47	117,023	678,528
2008	48	117,128	795,656
2009	49	120,314	915,970
2010	50	122,119	1,038,089
2011	51	125,734	1,163,823
2012	52	127,921	1,291,744
2013	53	129,840	1,421,584
2014	54	130,827	1,552,411
2015	55	131,782	1,684,193
2016	56	134,510	1,818,703
2017	57	137,348	1,956,051
2018	58	139,971	2,096,022
2019	59	142,771	2,238,793
2020	60	143,828	2,382,621
2021	61	142,052	2,524,673
2022	62	140,299	2,664,972
2023	63	138,566	2,803,538
2024	64	136,856	2,940,394
2025	65	135,166	3,075,560
2026	66	133,498	3,209,058
2027	67	131,850	3,340,908
2028	68	130,222	3,471,130
2029	69	128,614	3,599,744
2030	70	127,027	3,726,771
2031	71	125,458	3,852,229
2032	72	123,909	3,976,138
2033	73	122,380	4,098,518
2034	74	120,868	4,219,386
2035	75	119,377	4,338,763
2036	76	117,903	4,456,666
2037	77	116,447	4,573,113
2038	78	115,010	4,688,123
2039	79	25,452	\$4,713,575
LOPEZ		\$4,713,575	